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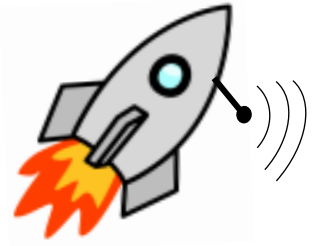
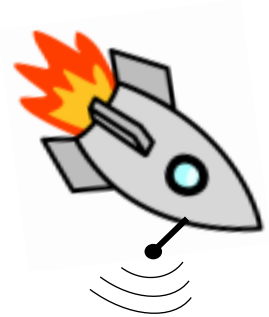
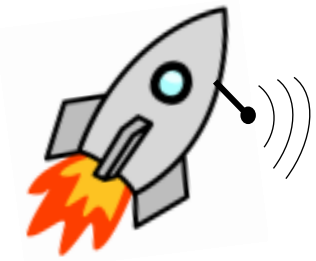
Why implement an effective and efficient TIDAS (Test In Device Automation System)?







Francesco Fiorentino @ Nokia Mobile Phone R&D

About Me

Francesco Fiorentino

Test Tool Architect, Platform SW Verification
Nokia Mobile Phone R&D

NOKIA

Working for Nokia since 2008

- ✓ Ulm, Germany
- ✓ Copenhagen, Denmark
- ✓ Beijing, China (since 2012 - present)

Currently Live in Beijing

Some terminology

...in short

Git	Git is a distributed revision control and source code management (SCM) system. git-scm.com
Git notes	git notes –ref=openci append –m “HELLO” [commitSHA1] http://git-scm.com/2010/08/25/notes.html
SHA1	SHA-1 is a cryptographic hash function. wikipedia.org/wiki/SHA-1

Gerrit	Gerrit is a web-based code review tool built on top of the git version control system. code.google.com/p/gerrit/

Redmine	web-based project management (includes REQ management) and bug-tracking tool. redmine.org
Redmine To Go	Windows Phone App, keep track of your projects wherever you are. redminetogo.com

CI	Continuous Integration System, in our contest base jenkins-ci.org

SCV	Single Commit Validation, validation performed on each software change
openCI	mechanism used in Platform SW CI

Test Goals

Support multi Platform at the same time
in different software branches

Test Type goals

- Platform **SCV** Test
- Platform **Release** Test
- Platform **Stability** Test
- Platform **Functional** Test

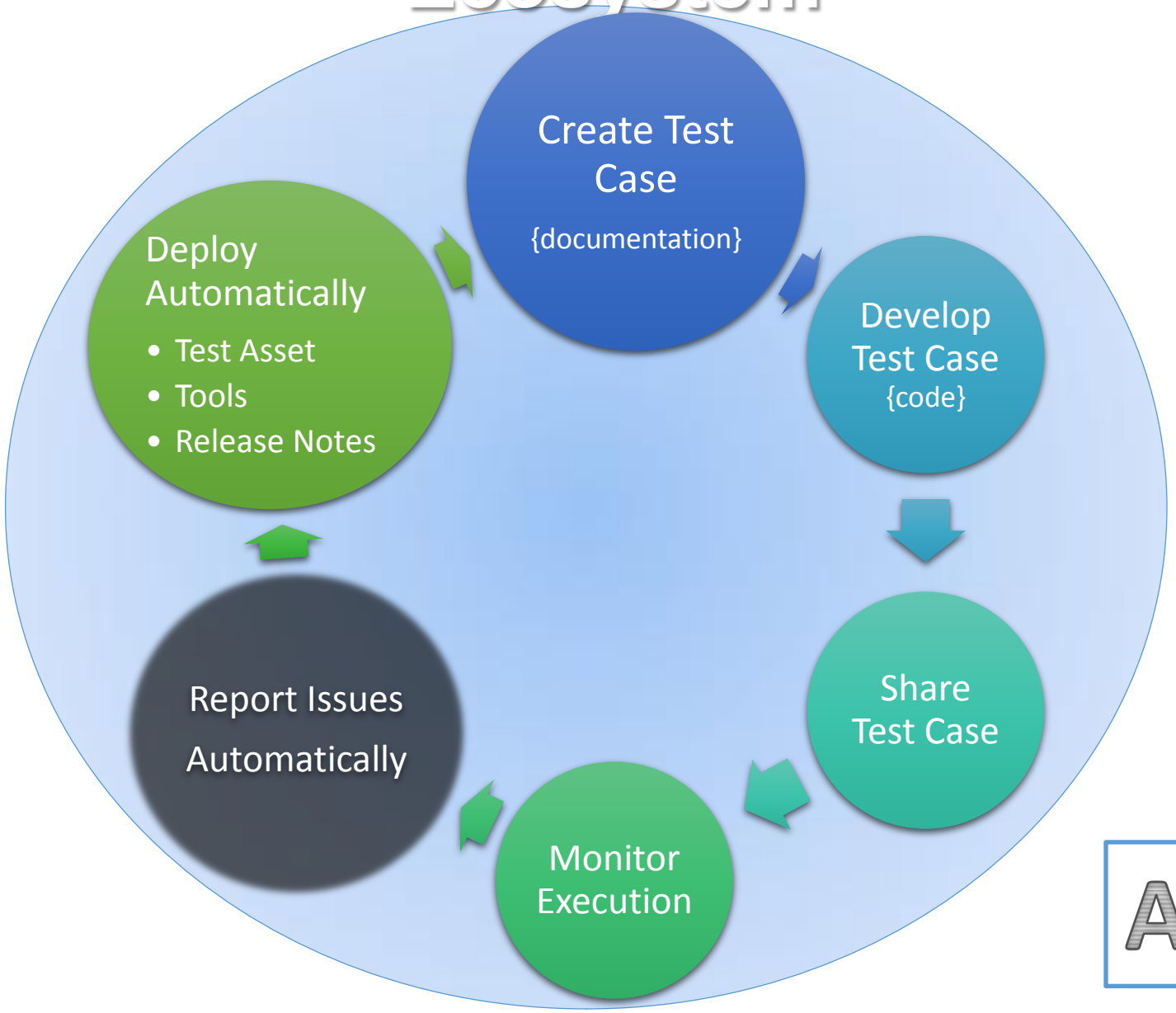
UI

Middleware

Engine Layer

Vendor

Ambition - Test Ecosystem



REUSE
REDUCE
RECYCLE

All within 1 System

How to achieve Test Goals?

TIDAS ecosystem

- **Minimalist approach**
- Able to share Test Cases between organization

- Integration to Project manager tool

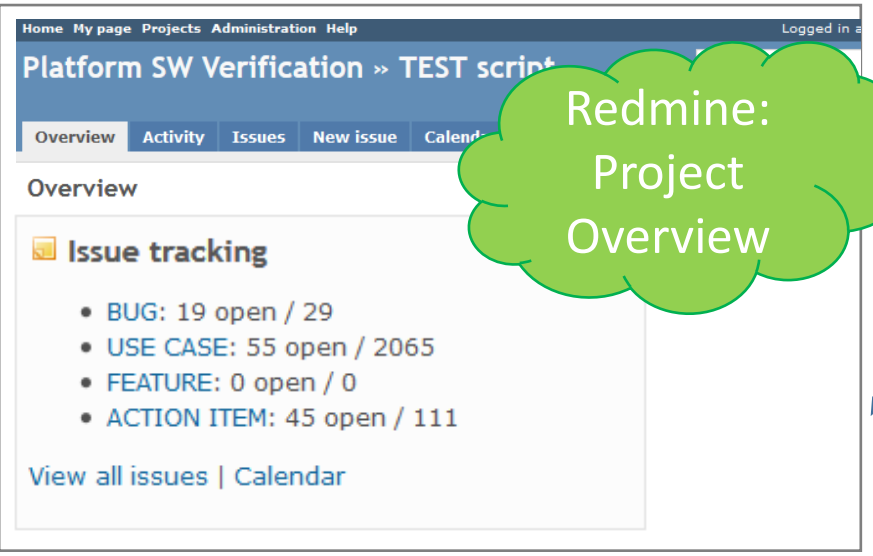
- Integration to CI System

- Integration to Test Case Release process

- Integration to LAB/Test Farm

- Adjust solution on project needs

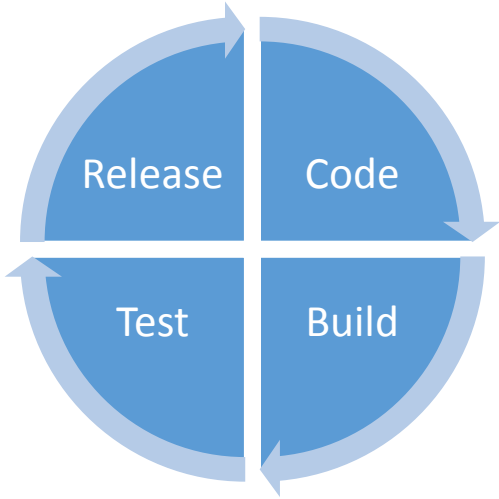
TIDAS Tool integration



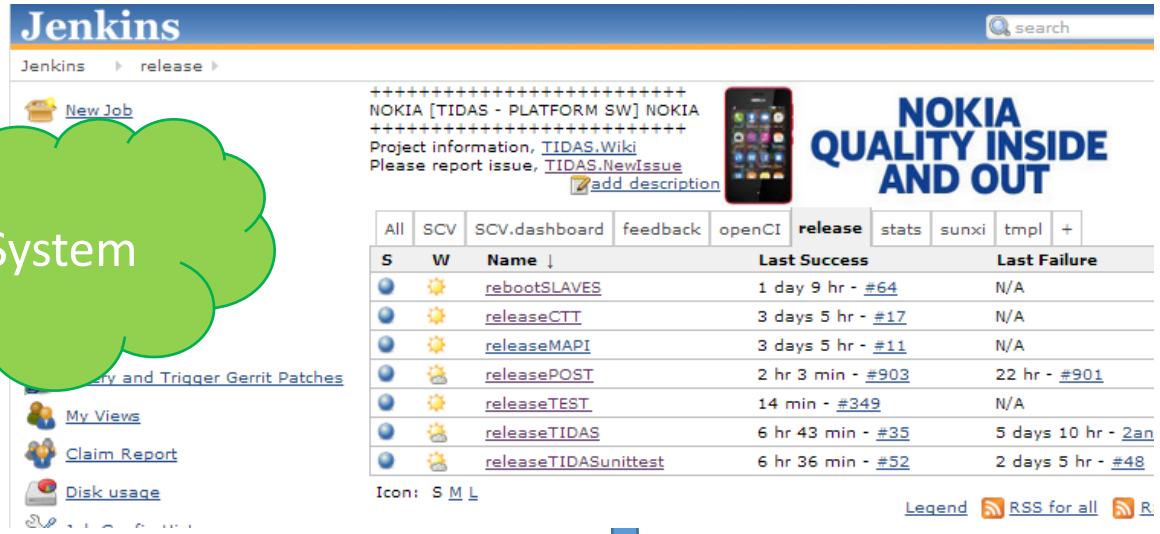
Redmine: Project Overview

Code Review

Gerrit / Git



CI System

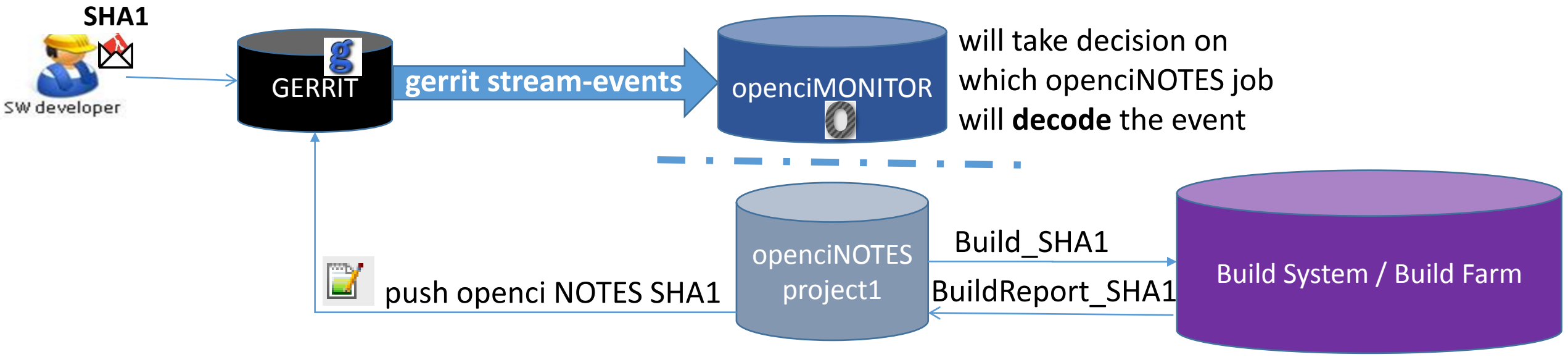


LAB / Farm: Test In Device Testing

How does it work SCV?

1 of 2 (Single Commit Validation)

= sw change
= gerrit event
= openCI trigger



- ✓ Now “git notes –ref=openci” for SHA1
  - ➔ contains in the history information about BuildReport
- ✓ Information is shared to gerrit which will generate an gerrit event
- ✓ Information is potentially available to everyone whom has access

How does it work SCV?

2 of 2(Validation part)

= openci git notes
= gerrit event
= openCI trigger

Reviewer	Code-Review	Content-Check	Manual-Testing	Verified
Fiorentino Francesco		✗		
ROBOT_psw_tidas				✓

Able to assess SHA1 [+/- 1 Verified review]

SHA1

SW developer

email

GERRIT

gerrit stream-events

openciMONITOR

will take decision on which openciNOTES job will **decode** the event

openciNOTES project1

push openci NOTES SHA1

Test_SHA1

TestReport_SHA1

LAB / Test In Device Automation Testing

- ✓ At this time "git notes –ref=openci" for SHA1
  - ➔ will contains the history build + test report
- ✓ You can use such information to have all sort of matrix and statistics

Update automatically Bug status

= openci git notes
= gerrit event
= openCI trigger

Example

refUpdate

GERRIT

gerrit stream-events

openciMONITOR

will take decision on
which openciNOTES job
will **decode** the event

push openci NOTES SHA1

openciNOTES
project1

Test_SHA1

TestReport_SHA1

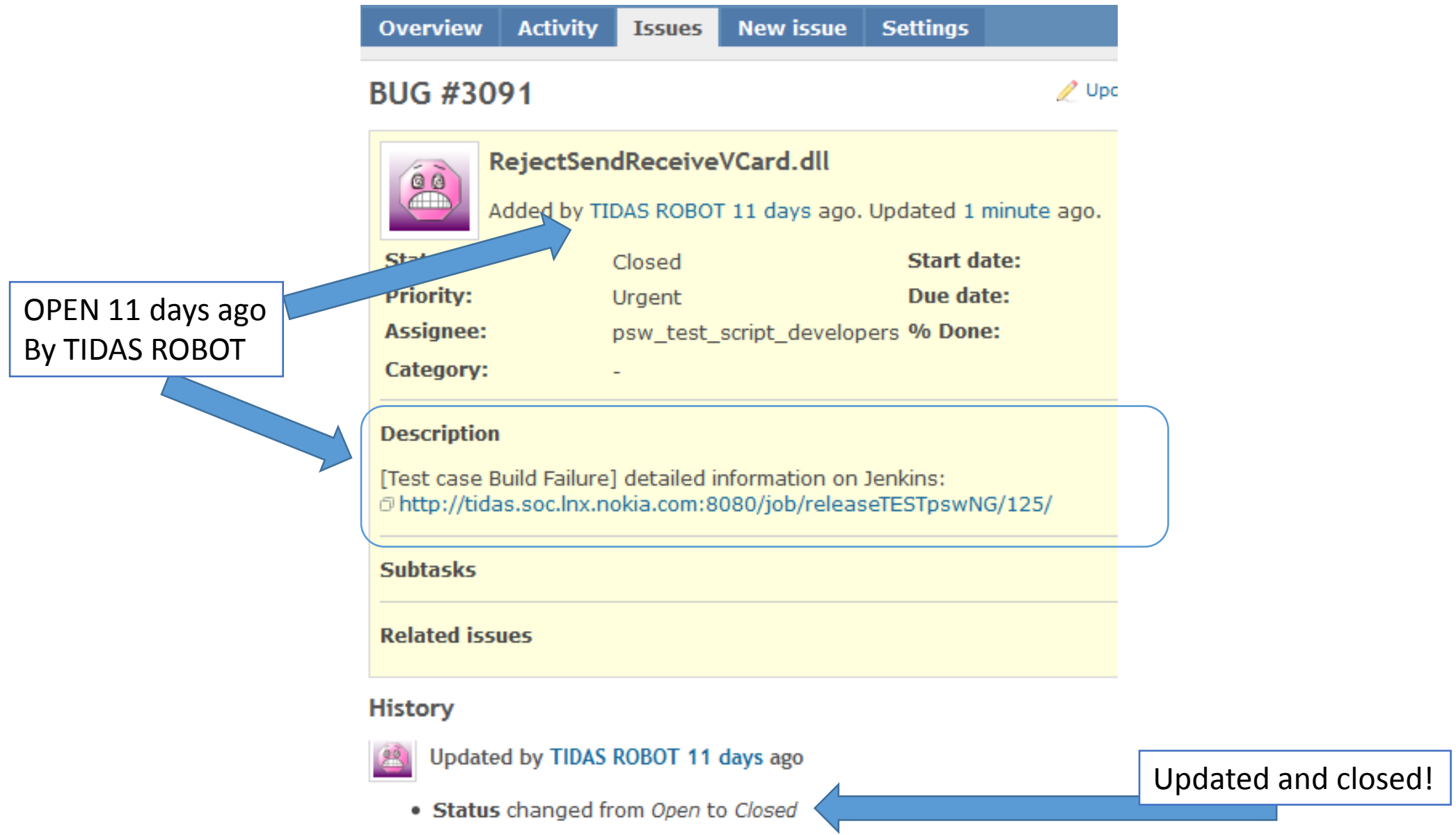
LAB / Test In Device
Automation Testing

RESTapi

REDMINE
flexible project management

- ✓ Create BUG
- ✓ Update BUG
- ✓ Close BUG, …

Update automatically Bug status



SUMMARY

ARE AWESOME OPENSOURCE PROJECTS

- MAKES DOABLE IMPLEMENT TIDAS WITH LIMITATED RESOURCES
- POSSIBLE TO ADAPT SOLUTION IN DIFFERENT SW BUSINESSES
- AUTOMATION: "CAN DO!”

THANKS!

QA, 问答